

I claim:

1. A wellbore cleaning apparatus, comprising:

a mandrel having a lower end extending beyond at least one lowermost fluid barrier, said lowermost fluid barrier extending toward the wellbore wall;

at least one first lateral opening through said mandrel, located between said lower end of said mandrel and said lowermost seal and substantially closer to said lowermost seal than to said lower end, said first lateral opening in fluid communication with an inner passage through said mandrel to accept fluid and debris as said mandrel is advanced downhole.

2. The apparatus of claim 1, wherein:

said inner passage extends through to said downhole end of said mandrel and is selectively closed.

3. The apparatus of claim 2, wherein:

said inner passage is selectively closed by a removable plug located between said lower end of said mandrel and first lateral opening.

4. The apparatus of claim 3, wherein:

said mandrel comprising a second passage extending from above to below said fluid barrier and selectively closed when said mandrel is advanced into the wellbore.

5. The apparatus of claim 4, wherein:

said second passage comprised an annular flowpath around said inner passage.

6. The apparatus of claim 5, wherein:

said lowermost fluid barrier is mounted on a sleeve fitted over said mandrel with at least one seal therebetween to define said annular flowpath.

said sleeve selectively locked to said mandrel in at least one of said first and said second positions.

13. The apparatus of claim 12, wherein:

said selective locking is defeated by rotation of said mandrel with respect to said sleeve.

14. The apparatus of claim 3, wherein:

said lowermost fluid barrier comprises at least two barriers of different diameters disposed in at least two portions of the wellbore that have corresponding diameters to said barriers, said mandrel comprising a first lateral opening adjacent each barrier communicating with said through inner passage and said plug located between said lower end and said first lateral opening adjacent the smaller of said fluid barriers.

15. The apparatus of claim 3, wherein:

said first lateral opening is selectively closed while a bypass passage from above to below said fluid barrier is opened to allow fluid to be forced from above to below said fluid barrier to flow outside said mandrel to said lower end thereof for return through said lower end of said passage with said plug removed.

16. The apparatus of claim 15, wherein:

said fluid barrier comprises a cup seal.

17. The apparatus of claim 5, wherein:

said annular passage is defined by a piston movable between a first position where said first lateral opening is in fluid communication with said inner passage and said annular passage is closed to a second position where said annular passage is open and said first lateral opening is blocked.

7. The apparatus of claim 6, wherein:

said sleeve selectively blocks said first lateral opening to allow pressure in said inner passage to remove said plug.

8. The apparatus of claim 7, wherein:

said sleeve further movable with respect to said mandrel to open said annular flowpath while blocking said first lateral opening on said mandrel.

9. The apparatus of claim 8, wherein:

said sleeve comprises a second lateral opening that substantially aligns with said first lateral opening on said mandrel when said mandrel is advanced into the wellbore.

10. The apparatus of claim 9, wherein:

said sleeve comprises a second lateral opening located above said lowermost fluid barrier and third lateral opening located below said lowermost fluid barrier, such that on withdrawal of said mandrel from the wellbore said second and third lateral openings provide access to said annular flowpath as said sleeve blocks said first lateral opening to allow fluid pumped through said annular passage to go externally of said mandrel to said lower end of said mandrel and into said inner passage.

11. The apparatus of claim 6, wherein:

said mandrel moves with respect to said sleeve due to said fluid barrier supporting said sleeve from the wellbore.

12. The apparatus of claim 11, wherein:

said mandrel is movable with respect to said sleeve between a first position where said first lateral opening is unobstructed by said sleeve to a second position where said first lateral opening is obstructed by said sleeve and said annular passage is opened;

18. The apparatus of claim 17, wherein:

said piston has a passage through it and is shifted by fluid flow through said passage running through it.

19. The apparatus of claim 18, wherein:

movement of said piston to block said first lateral passage allows pressure in said inner passage to blow out said plug as said annular passage is opened, whereupon fluid can be forced from above said fluid barrier through said annular passage and below said fluid barrier and outside said mandrel to then enter the lower end of said mandrel in said inner passage from where said plug has been previously blown out.

20. The apparatus of claim 19, wherein:

said piston is selectively lockable in at least one of it said first and second positions; and said fluid barrier comprises a cup seal.